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MANUFACTURING METHODS AND TECHNOLOGY (MM&T)  
SPECIFICATIONS FOR MINIATURE CATHODE RAY TUBE(U) THOMAS  
ELECTRONICS INC WAYNE NJ F M BRUND 30 APR 83  
TEI-A009-10 DAAK70-80-C-0168

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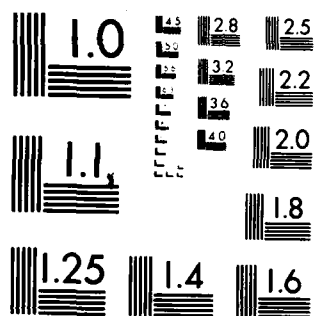
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MICROCOPY RESOLUTION TEST CHART  
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30 April 1983

Thomas Electronics, Inc.  
100 Riverview Drive  
Wayne, NJ 07470

## TENTH QUARTERLY REPORT

for period

1 January 1983 - 31 March 1983

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### Manufacturing Methods and Technology (MM&T) Specifications for Miniature Cathode Ray Tube

prepared by

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AUG 2 1983

prepared for

Procurement and Production Directorate  
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#### **ACKNOWLEDGEMENT**

This project has been accomplished as part of the US Army Manufacturing Methods and Technology (MM&T) Program which has as its objective the timely establishment of manufacturing processes, techniques, or equipment to insure the efficient production of current or future defense programs.

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"Drawings, Engineering, and Associated Lists," was submitted in draft form to the COR. Process Specifications were being refined for incorporation into Contract Line Item A002, "Type D, Specifications".



Manufacturing Methods and Technology (MM&T) Specifications for  
Miniature Cathode Ray Tube

TENTH QUARTERLY REPORT

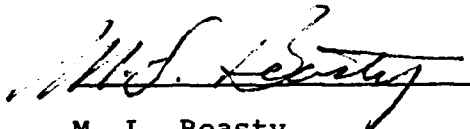
for period

1 January 1983 - 31 March 1983

The object of this study is to develop design, performance, and test specifications for the Miniature Cathode Ray Tube (CRT) assembly suitable for use in the Integrated Helmet and Display Sight System (IHADSS) of the Army Advanced Attack Helicopter (AAH).

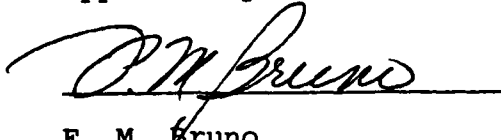
Contract Number: DAAK70-80-C-0168

Approved by:



M. L. Beasty  
Vice President - Engineering

Approved by:



F. M. Bruno  
Program Manager

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## ABSTRACT/SUMMARY

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TEI corrected two out-of-spec parameters (detected in the CRT assemblies being processed in preparation for Phase II - Confirmatory Samples) by making minor adjustments to its processing and inspection procedures. The updated ATP and QTP were filed in the Word Processor store and were ready to become the basis of several CDRL items when required. Contract Line Item A003, "Drawings, Engineering, and Associated Lists," was submitted in draft form to the COR. Process Specifications were being refined for incorporation into Contract Line Item A002, "Type D, Specifications".



## TABLE OF CONTENTS

<u>Paragraph</u>	<u>Title</u>	<u>Page</u>
	ABSTRACT / SUMMARY	2
1.0	PURPOSE	4
2.0	GLOSSARY	5
3.0	NARRATIVE AND DATA	6
4.0	CONCLUSIONS	7
5.0	PROGRAM FOR NEXT INTERVAL	8
6.0	DISTRIBUTION LIST	9

## 1.0 PURPOSE

The purpose of this Manufacturing Methods and Technology (MM&T) contract is to establish production methods and facilities required to produce the Miniature Cathode Ray Tube Assembly required for the Integrated Helmet and Display Sight System (IHADSS) of the Army Advanced Attack Helicopter (AAH).

The primary objectives are to develop vendor sources for the required individual components and establish viable production techniques to meet the necessary monthly production rate.

The product produced will be required to meet the mechanical, electrical, performance, and environmental parameters of MM&T H799838.

## 2.0 GLOSSARY

AAH.....	Advanced Attack Helicopter
ATP.....	Acceptance Test Procedure
CDRL.....	Contract Data Requirements List
COR.....	Contracting Officer's Representative
CRT.....	Cathode Ray Tube
EM.....	Equipment Manufacturer
IHADSS.....	Integrated Helmet and Display Sight System
MERADCOM.....	Mobility Equipment Research and Development Command
MM&T.....	Manufacturing Methods and Technology
MOD.....	Modification (to Contract)
NV&EOL.....	Night Vision & Electro- Optics Laboratory
PCO.....	Procuring Contracting Officer
PERT.....	Program Evaluation and Review Techniques
QTP.....	Qualification Test Procedure
TEI.....	Thomas Electronics, Inc.
TIR.....	Total Indicated Range

### 3.0 NARRATIVE AND DATA

CRT assemblies which were in process, in preparation for Phase II - Confirmatory Samples, were found to be out of spec in two parameters, but minor adjustments resolved each problem.

1. Cutoff readings were on the high side. Production was stopped and a minor spacing change was made on subsequent mounts. This brought the cutoff reading within spec.
2. Screen blemish criteria were not met because of the lacquering operation. Screen inspection procedures that were instituted, prior to sealing, will significantly reduce the risk of CRT blemish rejects.

TEI's second Burn-In Console became operational. The 1" Test Console was modified to facilitate performing the Geometric Distortion (Linearity) Test with the Ball Chart.

TEI's Acceptance Test Procedures (ATP) and Qualification Test Procedures (QTP) were updated in final form and were completely incorporated in a Word Processor store. As discussed with the COR, the ATP and QTP will become the basis of several items on the Contract Data Requirements List (CDRL).

Contract Line Item A003, "Drawings, Engineering, and Associated Lists" was prepared, and draft copies were readied for submission to MERADCOM.

#### 4.0 CONCLUSIONS

1. TEI corrected two out-of-spec parameters (detected in the CRT assemblies being processed in preparation for Phase II - Confirmatory Samples) by making minor adjustments to its processing and inspection procedures.
2. The updated ATP and QTP were filed in the Word Processor store and were ready to become the basis of several CDRL items when required.
3. Contract Line Item A003, "Drawings, Engineering, and Associated Lists," was submitted in draft form to the COR. Process Specifications were being refined for incorporation into Contract Line Item A002, "Type D, Specifications".

## 5.0 PROGRAM FOR NEXT INTERVAL

For the next quarter, TEI's plans are as follows:

1. Fabricate and test CRT assemblies for Phase II - Confirmatory Samples.
2. Maintain detailed test records for compiling into technical data items required by the contract.
3. Prepare and submit monthly status reports and also the draft and final quarterly reports.

## 6.0 DISTRIBUTION LIST

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